

Storm Analysis

As of 9/04/2016 00:00 EDT, water levels from Eastern North Carolina northward to Delaware continue to run elevated from 1.2 to 3 feet above tidal predictions. Water levels along the New Jersey and Long Island, New York coastline are slightly elevated running 0.5 to 1.5 feet above tidal predictions. Elevated water levels from storm surge will continue into Sunday along the Mid-Atlantic coastline.

As of this posting, from Saturday 9/3, the peak observed water levels based on preliminary measurements have been 4.38 feet above Mean

Higher High Water at USCG Hatteras, NC on the Pamlico Sound and 3.45 feet above Mean Higher High Water at Money Point, VA. Similar peak observed water levels were also observed at other gauges in the Hampton Roads region.

The strongest winds have decreased this evening along the North Carolina, Virginia and Maryland coastline but still range from 15 to 25 knots with gusts as high as 40 knots. Further north winds along the coast from Delaware up to New York range from 10-20 knots with occasional higher gusts. Winds in these areas are expected to increase through Sunday.

Barometric pressure is fairly steady this evening along the Mid-Atlantic coastline.

Water Level and Meteorological plots available below are updated automatically. A line denoting <u>Mean Higher High Water</u> (MHHW) is displayed to provide an approximate indication of when flooding inundation may occur.

For additional data, please see the <u>Center for Operational Oceanographic Products & Services</u> website. For more information or archived products and reports, please see the <u>Storm QuickLook</u> Homepage.

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SELECT NATIONAL HURRICANE CENTER ADVISORY INFORMATION:

POST-TROPICAL CYCLONE HERMINE ADVISORY NUMBER 27 NWS NATIONAL HURRICANE CENTER MIAMI FL 1100 PM EDT SAT SEP 03 2016

...HERMINE MOVING EAST-NORTHEASTWARD BUT EXPECTED TO TURN NORTHWARD ON SUNDAY...

...DANGEROUS STORM SURGE EXPECTED ALONG THE COAST FROM VIRGINIA TO NEW JERSEY...

SUMMARY OF 1100 PM EDT INFORMATION

LOCATION...36.5N 72.1W ABOUT 235 MI E OF NORFOLK VIRGINIA ABOUT 205 MI SE OF OCEAN CITY MARYLAND MAXIMUM SUSTAINED WINDS...70 MPH

PRESENT MOVEMENT...ENE OR 75 DEGREES AT 13 MPH

MINIMUM CENTRAL PRESSURE...998 MB

WATCHES AND WARNINGS

Analyst CDD

CHANGES WITH THIS ADVISORY:

The Tropical Storm Warning has been discontinued for the Pamlico and Albemarle Sounds.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT:

A Tropical Storm Warning is in effect for...

- * Ocracoke Inlet to west of Watch Hill
- * Chesapeake Bay from Drum Point southward
- * Delaware Bay

A Tropical Storm Watch is in effect for...

- * Watch Hill to Sagamore Beach
- * Block Island
- * Martha's Vineyard
- * Nantucket

For storm information specific to your area, including possible inland watches and warnings, please monitor products issued by your local National Weather Service forecast office.

DISCUSSION AND 48-HOUR OUTLOOK

At 1100 PM EDT, the center of Post-Tropical Cyclone Hermine was located near latitude 36.5 North, longitude 72.1 West. The post-tropical cyclone is moving toward the east-northeast near

13 mph. A turn toward the northeast and the north with a decrease in forward speed are expected on Sunday, followed by a slow

northward to northwestward motion through Monday. On the forecast track, the center of Hermine will meander slowly offshore of the

mid-Atlantic coast for the next couple of days.

Maximum sustained winds are near 70 mph with higher gusts. Little change in strength is expected tonight. After that, the cyclone is expected to intensify to hurricane force Sunday and Sunday night.

Hermine has a large wind field. Tropical-storm-force winds extend outward up to 205 miles from the center.

The estimated minimum central pressure is 998 mb.

HAZARDS AFFECTING LAND

WIND: Tropical storm conditions will continue to spread northward within the warning area along the Atlantic coast through Monday, and there may be multiple occurrences of tropical storm conditions along portions of the mid-Atlantic coast in the warning area during the next couple of days. Tropical storm conditions are possible in the watch area by Monday.

STORM SURGE: The combination of a storm surge and the tide will cause normally dry areas near the coast to be flooded by rising waters moving inland from the shoreline. Along the immediate coastline, the surge will be accompanied by large and dangerous waves. There is a danger of life-threatening inundation through tonight in the Hampton Roads area, and in the next 36 hours from Chincoteague, Virginia, to Sandy Hook, New Jersey. Persons within

these areas should take all necessary actions to protect life and property from rising water. Promptly follow all instructions, including evacuation orders, from local officials. There is also the possibility of life-threatening inundation during the next 48 hours at many coastal locations between Sandy Hook, New Jersey, and Bridgeport, Connecticut.

For a depiction of areas at risk, please see the Prototype Storm Surge Watch/Warning graphic, which displays areas that would qualify for inclusion under a storm surge watch or warning currently under development by the National Weather Service and planned for operational use in 2017. The Prototype Graphic is available at www.hurricanes.gov/graphics-at4.shtml?wsurge

The water could reach the following heights above ground if the peak surge occurs at the time of high tide...

North Carolina sounds...1 to 3 feet Hampton Roads area...2 to 4 feet Chincoteague, VA to Sandy Hook, NJ...3 to 5 feet Sandy Hook, NJ to Bridgeport, CT...2 to 4 feet

RAINFALL: Heavy rainfall associated with Hermine will mainly remain offshore through Monday/Labor Day. However, isolated maximum rainfall amounts of 1 to 3 inches are still possible along the immediate coastline of the Mid-Atlantic and Northeast and up into southeast New England.

SURF: Large waves generated by Hermine will affect the U.S. east coast from the mid-Atlantic states and expand northward along the

coast of southern New England through Monday. These waves are likely to cause life-threatening surf and rip current conditions, and significant beach erosion. Please consult products from your local weather office.

NEXT ADVISORY

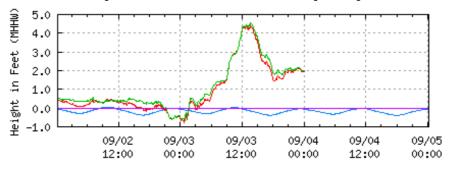
Next intermediate advisory at 200 AM EDT. Next complete advisory at 500 AM EDT.

Forecaster Beven

For the purpose of timely release, data contained within this QuickLook have undergone a "limited" NOS Quality Assurance/Control; however, the data have not yet undergone final verification. All data subject to NOS verification.

Jump to: USCG Station Hatteras - Water Level, USCG Station Hatteras - Winds, USCG Station Hatteras - Barometric, Oregon Inlet Marina - Water Level, Oregon Inlet Marina - Winds, Oregon Inlet Marina - Barometric, Duck - Water Level, Duck - Winds, Duck - Barometric, Chesapeake Bay Bridge Tunnel - Water Level, Chesapeake Bay Bridge Tunnel - Water Level, Sewells Point - Water Level, Sewells Point - Barometric, Money Point - Water Level, Money Point - Winds, Money Point - Barometric, Kiptopeke - Water Level, Kiptopeke - Winds, Wachapreague - Water Level, Wachapreague - Winds, Wachapreague - Barometric, Ocean City Inlet - Water Level, Ocean City Inlet - Water Level, Lewes - Water Level, Lewes - Water Level, Cape May - Winds, Atlantic City - Water Level, Atlantic City - Barometric, Sandy Hook - Water Level, Sandy Hook - Winds, Sandy Hook - Barometric, Montauk - Water Level

NOAA/NOS/CO-OPS <u>8654467 USCG Station Hatters</u>, NC Preliminary Water Level, relative to Mean Higher High Water(MHHW)

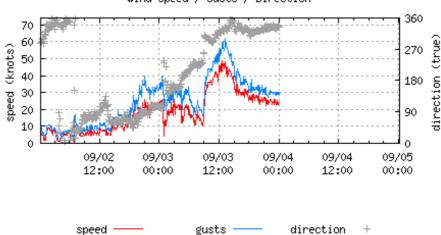


Predicted Tide (Obs-Pred) (Obs-Pred) MHHW

Last Observed Sample: 09/04/2016 00:06 (EDT). Data relative to MHHW Observed: 1.92 ft. Predicted: -0.06 ft. Residual: 1.98 ft. Historical Maximum Water Level: Oct 29 2012, 4.02 ft.

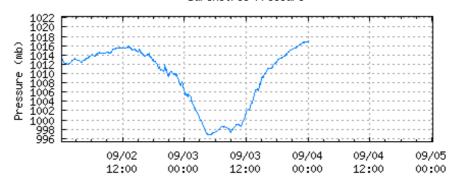
Next High Tide: 09/04/2016 11:17 (EDT), -0.01 ft.

NOAA/NOS/CO-OPS <u>8654467 USCG Station Hatteras</u>, <u>NC</u> Wind Speed / Gusts / Direction



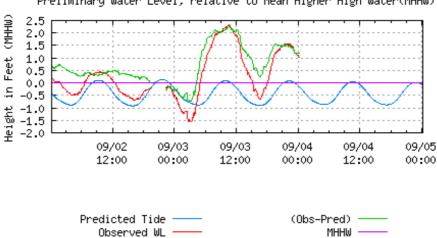
Last Observed Sample: 09/04/2016 00:06 (EDT) Wind Speed: 24 knots Gusts: 29 knots Direction: 333° T

NOAA/NOS/CO-OPS <u>8654467 USCG Station Hatteras</u>, <u>NC</u> Barometric Pressure



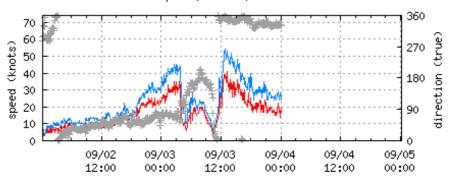
barometric pressure ——
Last Observed Sample: 09/04/2016 00:06 (EDT)
Barometric Pressure: 1017.0 mb

NOAA/NOS/CO-OPS <u>8652587 Oregon Inlet Marina</u>, NC Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/04/2016 00:18 (EDT). Data relative to MHHW Observed: 1.02 ft. Predicted: -0.16 ft. Residual: 1.18 ft. Historical Maximum Water Level: Aug 28 2011, 6.32 ft. Next High Tide: 09/04/2016 10:36 (EDT), 0.04 ft.

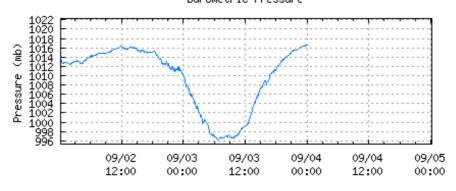
NOAA/NOS/CO-OPS <u>8652587 Oregon Inlet Marina, NC</u> Wind Speed / Gusts / Direction



speed gusts direction + Last Observed Sample: 09/04/2016 00:18 (EDT)

Wind Speed: 16 knots Gusts: 25 knots Direction: 342° T

NOAA/NOS/CO-OPS <u>8652587 Oregon Inlet Marina</u>, NC Barometric Pressure

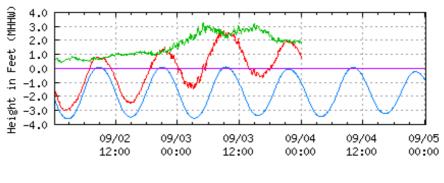


barometric pressure ----

Last Observed Sample: 09/04/2016 00:18 (EDT)

Barometric Pressure: 1016.8 mb

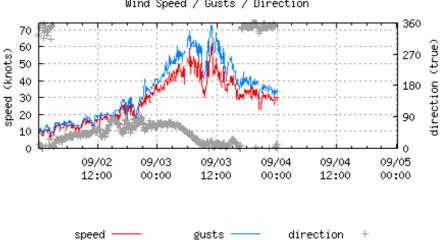
NOAA/NOS/CO-OPS <u>8651370 Duck, NC</u> Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Predicted Tide —— (Obs-Pred) —— Observed WL —— MHHW ——

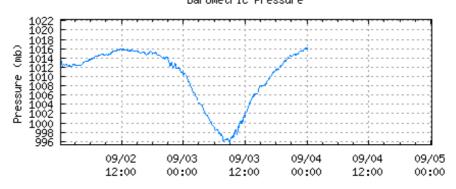
Last Observed Sample: 09/04/2016 00:12 (EDT). Data relative to MHHW Observed: 0.77 ft. Predicted: -1.17 ft. Residual: 1.94 ft. Historical Maximum Water Level: Sep 18 2003, 4.13 ft. Next High Tide: 09/04/2016 10:04 (EDT), 0.08 ft.

NOAA/NOS/CO-OPS 8651370 Duck, NC Wind Speed / Gusts / Direction



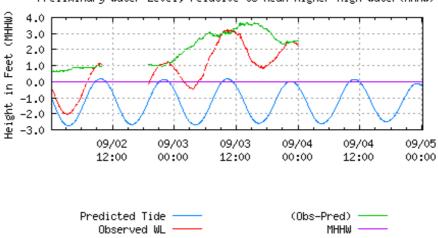
Last Observed Sample: 09/04/2016 00:12 (EDT) Wind Speed: 29 knots Gusts: 34 knots Direction: 9° T

NOAA/NOS/CO-OPS <u>8651370 Duck</u>, <u>NC</u> Barometric Pressure

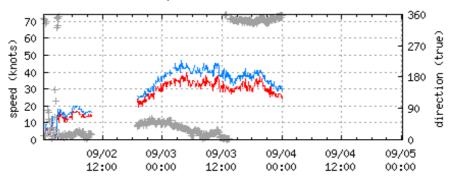


barometric pressure ——
Last Observed Sample: 09/04/2016 00:12 (EDT)
Barometric Pressure: 1016.2 mb

NOAA/NOS/CO-OPS <u>8638863 Chesapeake Bay Bridge Tunnel, VA</u> Preliminary Water Level, relative to Mean Higher High Water(MHHW)



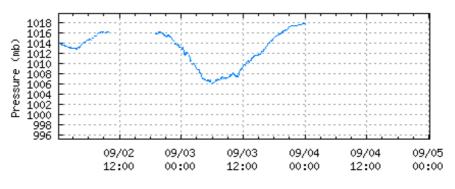
Last Observed Sample: 09/04/2016 00:06 (EDT). Data relative to MHHW Observed: 2.19 ft. Predicted: -0.34 ft. Residual: 2.53 ft. Historical Maximum Water Level: Nov 12 2009, 4.66 ft. Next High Tide: 09/04/2016 10:54 (EDT), 0.14 ft.



speed gusts direction + Last Observed Sample: 09/04/2016 00:06 (EDT)

Wind Speed: 25 knots Gusts: 29 knots Direction: 356° T

NOAA/NOS/CO-OPS <u>8638863 Chesapeake Bay Bridge Tunnel, VA</u> Barometric Pressure

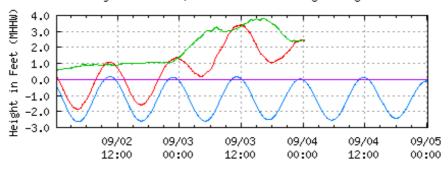


barometric pressure ----

Last Observed Sample: 09/04/2016 00:06 (EDT)

Barometric Pressure: 1017.9 mb

NOAA/NOS/CO-OPS 8638610 Sewells Point, VA Preliminary Water Level, relative to Mean Higher High Water(MHHW)



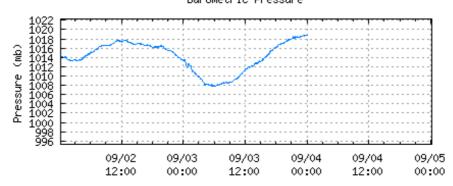
Predicted Tide (Obs-Pred) Observed WL

Last Observed Sample: 09/04/2016 00:12 (EDT). Data relative to MHHW Observed: 2.40 ft. Predicted: -0.07 ft. Residual: 2.47 ft. Historical Maximum Water Level: Aug 23 1933, 5.26 ft.

MHHW

Next High Tide: 09/04/2016 11:47 (EDT), 0.13 ft.

NOAA/NOS/CO-OPS 8638610 Sewells Point, VA Barometric Pressure

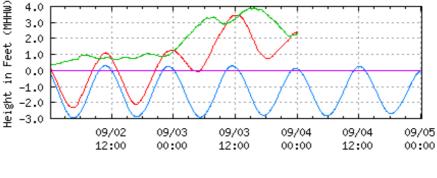


barometric pressure

Last Observed Sample: 09/04/2016 00:12 (EDT)

Barometric Pressure: 1018.9 mb

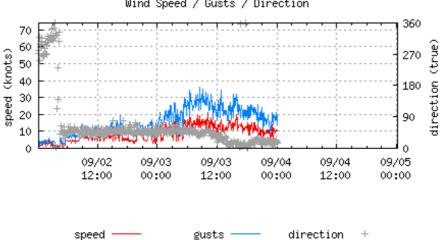
NOAA/NOS/CO-OPS <u>8639348 Money Point, VA</u> Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Predicted Tide (Obs-Pred) (Obs-Pred) (Obs-Pred) (MHHW (Obs-Pred) (

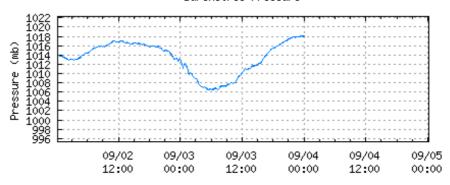
Last Observed Sample: 09/04/2016 00:06 (EDT). Data relative to MHHW Observed: 2.42 ft. Predicted: 0.10 ft. Residual: 2.32 ft. Historical Maximum Water Level: Nov 13 2009, 5.37 ft. Next High Tide: 09/04/2016 12:06 (EDT), 0.25 ft.

NOAA/NOS/CO-OPS <u>8639348 Money Point, VA</u> Wind Speed / Gusts / Direction



Last Observed Sample: 09/04/2016 00:06 (EDT) Wind Speed: 10 knots Gusts: 19 knots Direction: 14° T

NOAA/NOS/CO-OPS <u>8639348 Money Point, VA</u> Barometric Pressure



barometric pressure ——
Last Observed Sample: 09/04/2016 00:06 (EDT)
Barometric Pressure: 1018.2 mb

NOAA/NOS/CO-OPS 8632200 Kiptopeke, VA Preliminary Water Level, relative to Mean Higher High Water (MHHW) Height in Feet (MHHW) 4.0 3.0 2.0 1.0 0.0 -1.0 -2.0 -3.0 09/02 09/03 09/03 09/04 09/04 09/05 12:00 00:00 12:00 00:00 12:00 00:00

Last Observed Sample: 09/04/2016 00:06 (EDT). Data relative to MHHW Observed: 1.89 ft. Predicted: -0.20 ft. Residual: 2.09 ft. Historical Maximum Water Level: Mar 8 1962, 4.13 ft. Next High Tide: 09/04/2016 11:17 (EDT), 0.13 ft.

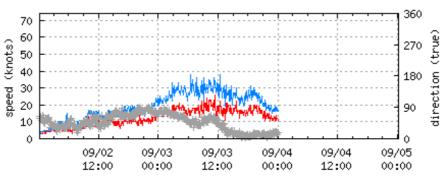
(Obs-Pred)

MHHW

Predicted Tide

Observed WL

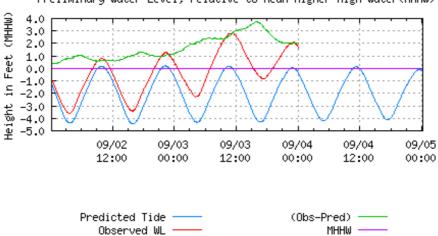
NOAA/NOS/CO-OPS $\underline{8632200~Kiptopeke,~VA}$ Wind Speed / Gusts / Direction



speed gusts direction + Last Observed Sample: 09/04/2016 00:06 (EDT)

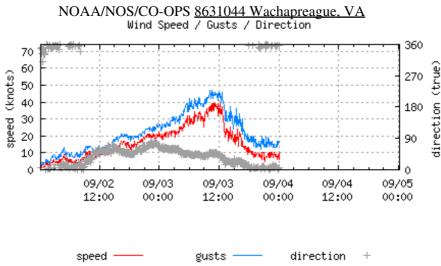
Wind Speed: 11 knots Gusts: 17 knots Direction: 14° T

NOAA/NOS/CO-OPS $\underline{8631044}$ Wachapreague, VA Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/04/2016 00:12 (EDT). Data relative to MHHW Observed: 1.58 ft. Predicted: -0.48 ft. Residual: 2.06 ft.

Historical Maximum Water Level: Feb 5 1998, 4.41 ft. Next High Tide: 09/04/2016 11:20 (EDT), 0.14 ft.



Last Observed Sample: 09/04/2016 00:12 (EDT) Wind Speed: 8 knots Gusts: 13 knots Direction: 360° T

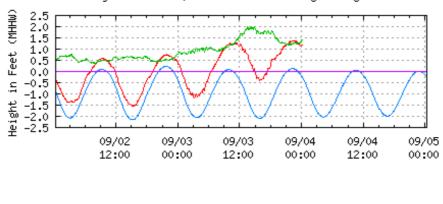
NOAA/NOS/CO-OPS 8631044 Wachapreague, VA NOAA/NOS/CO-OPS

	1-1-1-1			11			
This data type is not currently available from this station.							
-	availal	ole from	i this sta	ation.			

Last Observed Sample: 09/04/2016 00:12 (EDT)

Barometric Pressure: 1018.4 mb

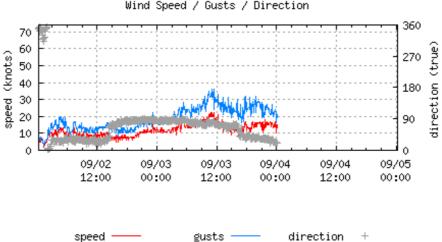
NOAA/NOS/CO-OPS <u>8570283 Ocean City Inlet, MD</u> Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Predicted Tide (Obs-Pred) — MHHW — Last Observed Sample: 09/04/2016 00:06 (EDT). Data relative to MHHW

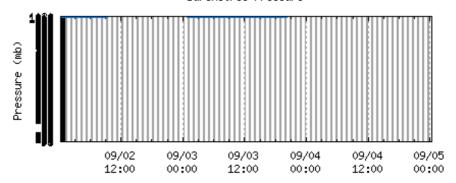
Observed: 1.18 ft. Predicted: -0.24 ft. Residual: 1.42 ft. Historical Maximum Water Level: Feb 5 1998, 3.61 ft. Next High Tide: 09/04/2016 10:32 (EDT), 0.06 ft.

NOAA/NOS/CO-OPS <u>8570283 Ocean City Inlet, MD</u> Wind Speed / Gusts / Direction



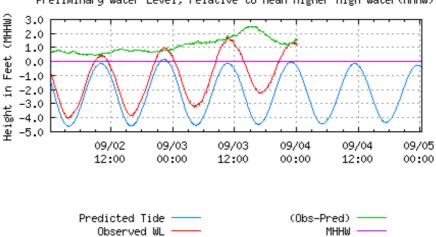
Last Observed Sample: 09/04/2016 00:06 (EDT) Wind Speed: 15 knots Gusts: 21 knots Direction: 20° T

NOAA/NOS/CO-OPS <u>8570283 Ocean City Inlet, MD</u> Barometric Pressure



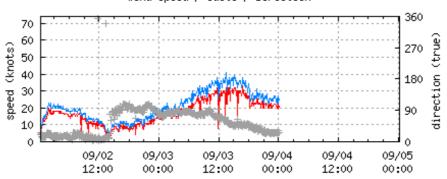
barometric pressure ——
Last Observed Sample: 09/04/2016 00:06 (EDT)
Barometric Pressure: 1018.7 mb

NOAA/NOS/CO-OPS <u>8557380 Lewes</u>, <u>DE</u> Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/04/2016 00:06 (EDT). Data relative to MHHW Observed: 1.16 ft. Predicted: -0.39 ft. Residual: 1.55 ft. Historical Maximum Water Level: Mar 6 1962, 4.57 ft. Next High Tide: 09/04/2016 11:17 (EDT), -0.14 ft.

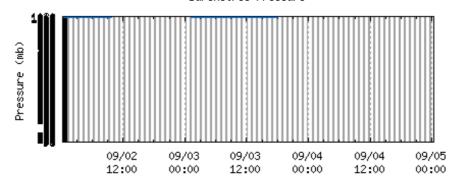
NOAA/NOS/CO-OPS <u>8557380 Lewes, DE</u> Wind Speed / Gusts / Direction



speed gusts direction + Last Observed Sample: 09/04/2016 00:06 (EDT)

Wind Speed: 21 knots Gusts: 25 knots Direction: 27° T

NOAA/NOS/CO-OPS <u>8557380 Lewes</u>, <u>DE</u> Barometric Pressure

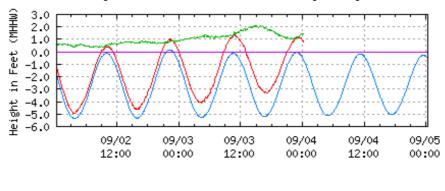


barometric pressure ----

Last Observed Sample: 09/04/2016 00:06 (EDT)

Barometric Pressure: 1019.1 mb

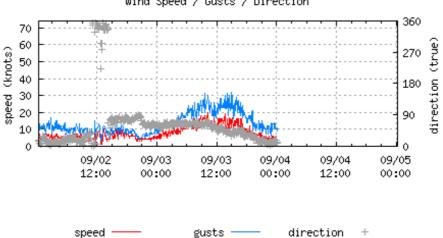
NOAA/NOS/CO-OPS <u>8536110 Cape May</u>, NJ Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Predicted Tide (Obs-Pred) (Obs-Pred) (MHHW)

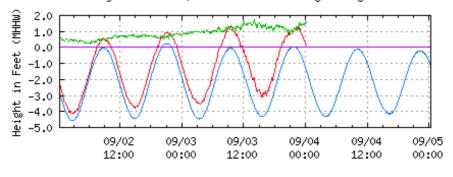
Last Observed Sample: 09/04/2016 00:12 (EDT). Data relative to MHHW Observed: 0.80 ft. Predicted: -0.67 ft. Residual: 1.47 ft. Historical Maximum Water Level: Oct 29 2012, 3.44 ft. Next High Tide: 09/04/2016 11:12 (EDT), -0.17 ft.

NOAA/NOS/CO-OPS <u>8536110 Cape May, NJ</u> Wind Speed / Gusts / Direction



Last Observed Sample: 09/04/2016 00:12 (EDT) Wind Speed: 4 knots Gusts: 9 knots Direction: 10° T

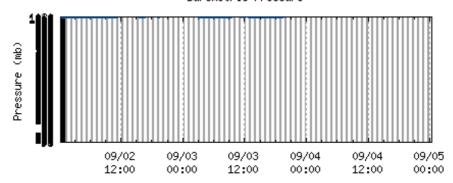
NOAA/NOS/CO-OPS <u>8534720 Atlantic City, NJ</u> Preliminary Water Level, relative to Mean Higher High Water(MHHW)



 (Obs-Pred) ——

Last Observed Sample: 09/04/2016 00:06 (EDT). Data relative to MHHW Observed: 0.15 ft. Predicted: -1.40 ft. Residual: 1.55 ft. Historical Maximum Water Level: Dec 11 1992, 4.38 ft. Next High Tide: 09/04/2016 10:07 (EDT), -0.10 ft.

NOAA/NOS/CO-OPS <u>8534720 Atlantic City</u>, NJ Barometric Pressure

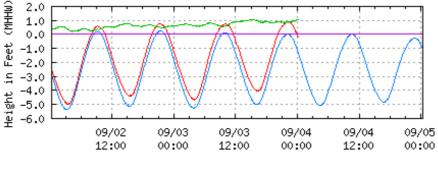


barometric pressure -

Last Observed Sample: 09/04/2016 00:06 (EDT)

Barometric Pressure: 1018.6 mb

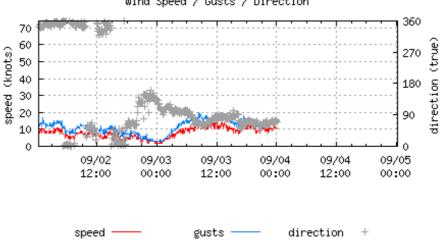
NOAA/NOS/CO-OPS <u>8531680 Sandy Hook, NJ</u> Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Predicted Tide —— (Obs-Pred) —— Observed WL —— MHHW ——

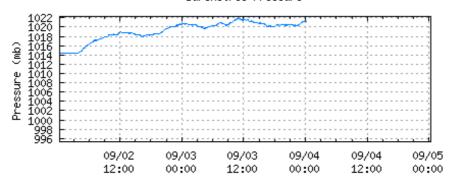
Last Observed Sample: 09/04/2016 00:06 (EDT). Data relative to MHHW Observed: -0.21 ft. Predicted: -1.29 ft. Residual: 1.08 ft. Historical Maximum Water Level: Sep 12 1960, 4.86 ft. Next High Tide: 09/04/2016 10:34 (EDT), 0.01 ft.

NOAA/NOS/CO-OPS <u>8531680 Sandy Hook, NJ</u> Wind Speed / Gusts / Direction



Last Observed Sample: 09/04/2016 00:06 (EDT) Wind Speed: 11 knots Gusts: 15 knots Direction: 69° T

NOAA/NOS/CO-OPS <u>8531680 Sandy Hook, NJ</u> Barometric Pressure



barometric pressure ——
Last Observed Sample: 09/04/2016 00:06 (EDT)
Barometric Pressure: 1021.2 mb

NOAA/NOS/CO-OPS 8510560 Montauk, NY Preliminary Water Level, relative to Mean Higher High Water(MHHW) Height in Feet (MHHW) 1.0 0.5 0.0 -0.5 -1.0 -1.5-2.0 -2.5 09/02 09/03 09/03 09/04 09/04 09/05 12:00 00:00 12:00 00:00 12:00 00:00

Last Observed Sample: 09/04/2016 00:06 (EDT). Data relative to MHHW Observed: 0.47 ft. Predicted: -0.18 ft. Residual: 0.65 ft. Historical Maximum Water Level: Aug 31 1954, 5.91 ft. Next High Tide: 09/04/2016 11:40 (EDT), 0.15 ft.

(Obs-Pred)

MHHW

Predicted Tide

Observed WL

Latest Water Level Observations on MHHW

Station II	Station Name	Date/Time	Observed Water Level	Predicted Tide	Residual Water Level	24 Hour Maximum Storm Tide
8654467	USCG Station Hatteras, NC	09/04/2016 00:06 (EDT)	1.92 ft	-0.06 ft	1.98 ft	4.38 ft
8652587	Oregon Inlet Marina, NC	09/04/2016 00:18 (EDT)	1.02 ft	-0.16 ft	1.18 ft	2.32 ft
8651370	Duck, NC	09/04/2016 00:12 (EDT)	0.77 ft	-1.17 ft	1.94 ft	2.68 ft
8638863	Chesapeake Bay Bridge Tunnel, VA	09/04/2016 00:06 (EDT)	2.19 ft	-0.34 ft	2.53 ft	3.24 ft
8638610	Sewells Point, VA	09/04/2016 00:12 (EDT)	2.40 ft	-0.07 ft	2.47 ft	3.40 ft
8639348	Money Point, VA	09/04/2016 00:06 (EDT)	2.42 ft	0.10 ft	2.32 ft	3.45 ft
8632200	Kiptopeke, VA	09/04/2016 00:06 (EDT)	1.89 ft	-0.20 ft	2.09 ft	2.52 ft
8631044	Wachapreague, VA	09/04/2016 00:12 (EDT)	1.58 ft	-0.48 ft	2.06 ft	2.83 ft
8570283	Ocean City Inlet, MD	09/04/2016 00:06 (EDT)	1.18 ft	-0.24 ft	1.42 ft	1.39 ft
8557380	Lewes, DE	09/04/2016 00:06 (EDT)	1.16 ft	-0.39 ft	1.55 ft	1.70 ft
8536110	Cape May, NJ	09/04/2016 00:12 (EDT)	0.80 ft	-0.67 ft	1.47 ft	1.44 ft
8534720	Atlantic City, NJ	09/04/2016 00:06 (EDT)	0.15 ft	-1.40 ft	1.55 ft	1.34 ft
8531680	Sandy Hook, NJ	09/04/2016 00:06 (EDT)	-0.21 ft	-1.29 ft	1.08 ft	0.91 ft
8510560	Montauk, NY	09/04/2016 00:06 (EDT)	0.47 ft	-0.18 ft	0.65 ft	0.60 ft

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